





Dyslexia debated, then and now: a historical perspective on the dyslexia debate

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ABSTRACT

The 'dyslexia debate' is resilient. In the media, a key component of the debate is the notion that dyslexia does not exist, popularised by a series of vociferous commentators. For them, dyslexia is an invention of overly-concerned parents, supported by a clique of private educational psychologists willing to offer a diagnosis - for a fee even where no condition exists. In academic circles, especially psychology, dyslexia critiques are also present. In these, the principal argument is that the term 'dyslexia' is unhelpful - more an emotive word designed to attract funding, than a clearly defined scientific condition. Such arguments stand against other research in psychology, and discussion has become contentious. Largely missing from both sides of the debate, however, is a historical perspective. In this article, the origins of the dyslexia debate are traced, showing how queries about the term's efficacy have marked dyslexia's history since it was first identified in the 1870s. Through this tracing, this account seeks to move discussion beyond the existing either/or binary of dyslexia's existence.

KEYWORDS

Dyslexia; learning difficulty; dyslexia debate; word blindness; history of education

Introduction: dyslexia and its discontents

Dyslexia remains one of the more controversial terms in education policy and practice. In recent years, a series of television documentaries, books, media reports and speeches have criticised dyslexia - at best, calling it a term that has lost credibility and should be replaced (Elliott & Grigorenko, 2014a); at worst, a fabrication, based on suspect science (Bennett, 2017) and perpetuated (in significant part) by a biased dyslexia lobby (Liddle, 2014). In late 2018, such debate came to a head after Warwickshire County Council, in a review of its guidance around special educational needs and disabilities, stated that the research field 'lacked consensus' and that 'the diagnosis of dyslexia is scientifically questionable and can be misleading' (Henshaw, 2018). In response, Lord Watson of Invergowie, a supporter of the term, wondered 'if, perhaps, it [Warwickshire County Council] has also advised their residents that the earth is actually flat and that there is no such thing as global warming' (Hansard, 2018). In turn, a conference in early 2019 - organised by leading critic of the term, Joe Elliott, and featuring representatives from Warwickshire County Council – offered further criticism of dyslexia (UCL IOE Media Services, 2019).

In the science of reading, Joe Elliott and Elena Grigorenko's book, The Dyslexia Debate, remains dyslexia's foremost critique. For them, the label is too ambiguous to be helpful. Thus, 'while biologically based reading difficulties exist', 'there are very significant differences in the ways in which this label ["dyslexia"] is operationalised, even by leading scholars' (Elliott & Grigorenko, 2014a, pp. 4, 32). Broadly-accepted definitions of dyslexia, such as the Rose Review's (see below), are 'highly general' (Elliott & Grigorenko, 2014a, p. 8) – dyslexia, Elliott and Grigorenko suggest, cannot be differentiated from other reading difficulties. As such, they propose a revised nomenclature: 'In respect of wordreading difficulty, the construct reading disability is surely preferable ... This term dispenses with much of the conceptual and political baggage associated with dyslexia' (Elliott & Grigorenko, 2014a, p. 178). Elliott and Grigorenko's arguments have been appropriated (in partial form) by journalists including Rod Liddle (2014) and Peter Hitchens (2014). For Liddle (2014), 'dyslexia' is useful only to parents seeking to excuse their children's difficulties, and 'should be consigned to the history books. It is utterly meaningless ... a pretentious word for "thick".' The commentaries of these pundits matter, with media coverage of dyslexia a key mode through which public understanding (or otherwise) of the condition is propagated (Kirby, 2019a).

Researchers in the science of reading have responded to these claims. For some, the suggestion that those with dyslexia and other poor readers cannot be disaggregated is demonstrably false. According to the language expert, Franck Ramus (2014, p. 3372), 'phonological deficits play a causal role in certain types of reading disability, but not in all of them'. As such, the category dyslexia is diagnostically viable. For others, scientific debates about the precise characterisation of the condition should not detract from the overall utility of the label, which draws attention and funding to pupils with clear disadvantages in schooling (Bishop, 2014; Snowling, 2015). For still others, the 'dyslexia debate' is unhelpful, obfuscating the substantial progress that has been made by researchers in understanding reading problems, and the fact that, as a skill (reading) that conforms to a normal statistical distribution, there will be, by necessity, extremes of poorer and better readers (Shaywitz & Shaywitz, 2005). This is another reason why tracing the history of the dyslexia debate is so crucial: through it, the place of the debate can be more accurately presented within the broader history of (often highly successful) efforts to address the causes of reading difficulties.

As with dyslexia's detractors, the arguments of those supportive of dyslexia in the popular sphere are often more forceful than those in academia. In part, this reflects the fact that dyslexia advocacy groups have long campaigned for the dyslexia label and concomitant support, and are wary of achievements in this area being threatened (see below). For the dyslexia support group, Reading Well (2014), 'Elliott and Grigorenko's arguments against the term dyslexia consist almost entirely of "straw man" attacks and semantics ... They intentionally mix symptoms, causes and definitions of dyslexia in arguing that there is no agreed upon understanding of the term'. 'Though imperfect, ["dyslexia"] helps define and distinguish reading problems, aligns deficits with effective interventions, motivates parents and legislators to action and protects children from being falsely labelled as stupid or lazy' (Reading Well, 2014).

Clearly, the dyslexia debate continues in many quarters. What is missing from the discussion, however, is a historical perspective - an account of dyslexia's 'conceptual and political baggage', in Elliott and Grigorenko's words. A historical approach is important,

because many of the current arguments used to critique the term have been made, in various guises, previously. In this way, the current 'dyslexia debate' is less a defining moment in dyslexia's history, when detractors have finally and fatally been able to undermine the term, than another episode in an ongoing discussion about dyslexia - and a historical perspective on dyslexia can help chart this discussion. Moreover, present arguments against dyslexia often intersect with dyslexia's political and social, as well as scientific, histories. (For example, detractors of the term frequently cite its greater diagnosis in wealthier socioeconomic groups as evidence of its invention by the middle-classes. The history of dyslexia, however, shows that this is not necessarily an accurate conclusion [see below]). The dyslexia debate is often contested in the social sphere, but as yet there has been little attempt to understand the debate from a social perspective.

The dyslexia debate: how a historical approach can contribute

To contextualise the discussion here, a working definition of dyslexia is required. The most influential current description of dyslexia is that of the UK's 2009 Rose Review, formed to recommend best practice in identifying and teaching children with dyslexia and literacy difficulties. In the Rose Review, dyslexia is defined as

a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling. Characteristic features of dyslexia are difficulties in phonological awareness, verbal memory and verbal processing speed. Dyslexia occurs across the range of intellectual abilities (Rose, 2009, p. 10).

As we have seen, this definition has been critiqued, but it provides a useful starting point, and exemplifies well the understanding of those who support the concept. Indeed, while (more extreme) detractors, including some of the media commentators cited above, might query whether this definition applies to anything other than low intelligence, other critics are concerned more with the term than the underlying scientific reality. For them, the difficulties the Rose Review describes are accepted – only their differentiation from other reading problems, and the efficacy of the term 'dyslexia', are queried (Elliott & Grigorenko, 2014a).

In this way, the dyslexia debate encompasses critiques of both dyslexia 'the reality' (the 'objective' phenomenon), and dyslexia 'the label' (the 'subjective' term used to describe these). For some, there is no such thing as dyslexia at all; for others, the term is misleading, but the underlying difficulties are conceded. (In practice, the distinction between these two perspectives is often blurred in individual critiques of dyslexia.) This article does not contribute to scientific debates around dyslexia, per se, but it does show, as the subdiscipline of the History of Science explores, how 'scientific' debates are everywhere and always imbricated with the social circumstances in which they develop and are practised (Livingstone, 2003); or, as Disability Studies puts it, that there is no straightforward binary between 'medical' and 'social' models of learning difficulties like dyslexia (Macdonald, 2009). Rather, medical/scientific understandings of dyslexia are produced via social processes. In this article, five main themes of the current dyslexia debate are historicised, showing how, rather than being fully objective critiques of the condition, they have emerged from dyslexia's particular social, political and educational histories.

To do this, this article draws on the collections of the UK Dyslexia Archive (UKDA). Founded in 2016, the UKDA, based at St John's College, Oxford, is being used to write a comprehensive history of dyslexia. This includes the rise of what might be called 'modern dyslexia' from the 1960s onward, when, through organisations like the Word Blind Centre for Dyslexic Children, Dyslexia Institute and British Dyslexia Association, dyslexia was embedded into British society. Political recognition of dyslexia was ultimately achieved in the 1980s, with greater educational provision rolling out in the years that followed (Kirby, 2019b). The period from the 1960s onward has attracted the most academic attention, including both first-hand reflections by leading researchers (Miles, 2006; Miles & Miles, 1999), and critical discussions of the cultural, political and gendered histories of dyslexia (Kirby, 2019a, 2019b, 2019c; Montgomery, 2019). Together, these have shown how current educational provision for dyslexia was achieved, via advocacy movements that paralleled those of other learning difficulties, such as autism and attention deficit hyperactivity disorder (ADHD) (Evans, 2017; Smith, 2012; Waltz, 2013).

But the histories of dyslexia and the 'dyslexia debate' run deeper than this. The characteristic symptoms of dyslexia were first identified in the 1870s (Anderson & Meier-Hedde, 2001). To date, however, the period between 1870 and 1960 has attracted little scholarly attention. The most substantial engagement has been from Sociology, where Tom Campbell has contextualised the initial identification of dyslexia with the advent of widespread literacy (Campbell, 2011, 2013). Elsewhere, the early case reports of Victorian medics have been addressed (Anderson & Meier-Hedde, 2001). But as yet, the importance of this period in understanding the more recent trajectory of dyslexia has gone unexplored. This article shows how many of the arguments against the condition were laid down during this period, frequently drawing on social, not just scientific, aspects of dyslexia's history. In this way, an analysis that contextualises the dyslexia debate with dyslexia's social, political and educational histories offers a new perspective on these discussions, and the possibility of a new understanding of the dyslexia debate.

In adopting this perspective, this article draws on a range of recent historical work that has sought to explore how learning difficulties, such as dyslexia, autism and ADHD, have emerged in modern British society (e.g., Evans, 2017; Smith, 2012; Waltz, 2013). This article builds on this work, using a historical framing to show how critiques of dyslexia have emerged and their connection to dyslexia's wider educational and social contexts. Through this, it argues that contemporary debates around the condition cannot be resolved through science alone, but through an improved understanding of dyslexia's past. In particular, it shows how the history of the dyslexia debate mirrors historical discussion of other 'hidden disabilities', such as those listed above. In addition, it reaffirms that substantial gains have been made for children with dyslexic difficulties, despite recurring arguments against the term (Kirby, 2019b). In this way, it seeks to unpack arguments against the condition, highlighting what is new about current discussions, but also what has been heard before, and the limitations of arguments stemming from social aspects of dyslexia's history (such as its initial association with middle-class pupils) that could not easily have unfolded any other way.

In structure, this article begins by providing an overview of key debates around dyslexia – from the 1870s, when dyslexia was first identified and largely discussed as 'word-blindness', to the 1960s, when dyslexia in its modern form came to prominence. It argues that, by the 1960s, the basis for the five main themes of current dyslexia critiques were in place. Specifically, these claim that dyslexia is:

- (1) An ill-defined term, unable to be differentiated from other reading difficulties and so dubious as a concept;
- (2) An invention of over-anxious parents, seeking to explain and so justify their children's learning difficulties;
- (3) A 'middle-class' myth, more common in pupils from wealthier backgrounds because of this group's ability to form a dyslexia lobby;
- (4) Over-diagnosed, especially by educational psychologists unfamiliar with the term and/or seeking to appease over-anxious parents;
- (5) Frequently associated with high intelligence by proponents, despite there being no scientific basis for that link.

Each of these themes is evaluated further in a Discussion section, showing how they intersect with dyslexia's early social history. Through this, the article seeks to show that ongoing debate about the term – understandably frustrating for teachers, educational psychologists and others working directly with children with reading difficulties, for whom a single, clear definition of the concept might be preferable – should be considered more a product of dyslexia's particular social history, than a genuine or scientific reason for the term to be abandoned. In this way, it argues that the term dyslexia should be retained, and that many of the criticisms levelled against dyslexia, even today, are based on myths about the condition that can be traced to the Victorian period. This article concludes by reflecting on how continuing disputes might be transcended.

From 'word-blindness' to 'dyslexia': the first dyslexia debates (1877-1962)

In 1877, the reading and spelling difficulties characteristic of dyslexia today were first identified by Adolph Kussmaul, a German Professor of Medicine. Termed 'word blindness', such difficulties were believed (incorrectly) to stem from some form of ocular deficit (Kussmaul, 1877). 'Dyslexia' was coined by Kussmaul's contemporary, Rudolph Berlin, an ophthalmologist and academic, bringing the term in line with other common diagnoses of the time: alexia and paralexia (Berlin, 1883). These implied a physical disease of the brain, in which reading ability, in particular, was affected (Wagner, 1973). The especial importance of Kussmaul to the origins of dyslexia research were attested to by James Hinshelwood, a British ophthalmologist, who developed this early German work in the following years. 'To Kussmaul', writes Hinshelwood (1917, p. 1), 'must be given the credit of first recognizing the possibility of this inability [to read] being met with as an isolated symptom.' Berlin, meanwhile, has been remembered as the person 'who named the ship even though he never became her captain' (Wagner, 1973, p. 57). Kussmaul and Berlin were unlikely to be describing only dyslexia, but their attention to reading difficulties proved influential.

By the 1890s, British physicians, including Hinshelwood, came to the fore. Their studies align more closely with dyslexia as defined today. William Pringle Morgan, a general practitioner, provided the most famous description of dyslexia of these physicians. Referring to Percy F., 'a well-grown lad, aged 14', Pringle Morgan (1896, p. 1378) observed that: 'He has

always been a bright and intelligent boy, quick at games, and in no way inferior to others of his age. His great difficulty has been - and is now - his inability to learn to read.' This inability is so remarkable, and so pronounced,' Pringle Morgan continued (Pringle Morgan, 1896, p. 1378), 'that I have no doubt it is due to some congenital defect.' Four years later, Hinshelwood (1900, p. 1507) described another, highly similar case: 'a boy, aged 10 years'. He was apparently a bright and in every respect an intelligent boy. His father, a medical man, thought that his great difficulty in learning to read might be due to some visual or cerebral defect' (Hinshelwood, 1900, p. 1507). But, Hinshelwood explained, 'the difficulty in learning to read was due not to any lowering of the visual acuity, but to some congenital deficiency of the visual memory for words' (Hinshelwood, 1900, p. 1507).

Consensus in the field, though, was not universal. When Hinshelwood first laid out his ideas, he differentiated between 'word-blindness', 'cécité verbale', 'Wordblindheit' (Hinshelwood, 1895), and 'dyslexia' - the latter 'a peculiar form of word-blindness' (Hinshelwood, 1896, p. 1565). The precise differences between each are today of limited relevance – what is notable is how this terminology was then debated. With respect to 'word-blindness', William Broadbent, a physician and contemporary of Hinshelwood's, argued that, 'in my judgment, the employment of this term has been misleading and unfortunate.' An inability to read words, he suggested, was usually 'a part of a much larger deficit' (Broadbent, 1896, p. 18). For his part, Hinshelwood (1896, p. 1452) replied: 'Now I quite agree with Sir William Broadbent that the word has frequently been used by writers loosely with different meanings attached to it and therefore it has been frequently misleading. The fault, however, lies, not in the word, but in the fact that those who use it have not always had a clear conception of what Kussmaul meant by it.' How best to define specific and general reading difficulties was in dispute, with dyslexia deemed a multi-dimensional disorder.

The early descriptions of 'word-blindness' by William Pringle Morgan and James Hinshelwood also hint at something else: why reading difficulties emerged as a problem in the late 19th-early 20th centuries, and who raised them as an issue. In the case studies documented by both these physicians, boys struggling with reading were brought for assessment by their fathers, whose concerns reflected the increasing importance of literacy to educational and career success. With the advent of compulsory schooling after the 1870 Education Act, learning difficulties like word blindness began to be identified at a much broader scale. Such identification led to the establishment of several investigative bodies, including the 1904 Royal Commission on the Care and Control of the Feeble-Minded, through which educationally 'deficient' pupils, for the first time, 'achieved official state recognition as a problem that needed to be solved' (McDonagh, 2008, p. 306). At the end of the 19th century, the inability to learn like the majority of children became officially enshrined as 'deficit'. For parents of means, like those who consulted Pringle Morgan and Hinshelwood, correcting this deficit became crucial.

By the beginning of the 20th century, the importance of ophthalmology receded as research increasingly pointed away from visual deficits in dyslexia's aetiology. By the 1920s, Samuel Orton, an American neuropathologist, 'disputed the premise that the roots of reading disability could be located in the angular gyrus [as the Victorian physicians had believed] and advanced his own theory that attributed reading disorders to a lack of cerebral dominance' (Anderson & Meier-Hedde, 2001, p. 17). While incorrect, this hypothesis shifted concerns towards dyslexia as a developmental disorder. In turn, this brought dyslexia under the purview of the relatively new discipline of psychology, which, during

the early decades of the 20th century, had become progressively demarcated from philosophy on one hand, medicine on the other (N. Rose, 1985). Dyslexia, it appeared, was a problem with *how* children were thinking, rather than a disease, injury or other physical defect of the brain. Given its especial role in affecting learning, dyslexia became the concern of educational psychology, in particular: the sub-discipline best-suited to measuring, understanding and recommending treatment for developmental difficulties.

In the UK, the first educational psychologist to work for a governmental body was Cyril Burt (later a controversial figure [Joynson, 1989]). In the wake of the 1913 Mental Deficiency Act, Burt assumed responsibility for the identification of children with learning difficulties, and their enrolment in special schools (Mazumdar, 2004). Through this work, Burt encountered a series of children with reading difficulties. By the 1940s, Burt claimed that such difficulties implied a failure 'in our efforts to teach reading to our duller and more backward pupils', but also differentiated these pupils from 'children who suffer from special disability in reading, i.e. who are not notably backward in intelligence or in other subjects' (Burt & Lewis, 1946, p. 117). 'Most frequently,' he continued, 'the child is declared to be suffering from "congenital word blindness" ... Nearly every educational psychologist has had cases referred to him in which this verdict has been pronounced; and it now seems pretty well agreed that, provided adequate and appropriate teaching can be arranged, practically all such cases will respond as well as their intelligence and other abilities will permit' (Burt & Lewis, 1946, p. 117).

But what was 'adequate and appropriate teaching'? In 1942, Millfield, the independent school in Somerset, became the first school in Britain to address dyslexia specifically. Their first pupil diagnosed as dyslexic was Martin Attlee, son of then Deputy Prime Minister, Clement. In state education, no dedicated provision existed, outside of the ill-fitted special schools to which Burt sent less-privileged children. Legislation, though, was placing additional scrutiny on educational performance. With the 1944 Education Act, schooling was made compulsory until 15 years-of-age and the 'eleven-plus' examination was instituted, creating a two-tier educational system that expanded until the 1960s, before diminishing (HM Government, 1944). Failure to address specific learning difficulties in primary school thus promised a deleterious effect on later life outcomes, excluding one from grammar school and so the surest pathway to university and the professions (Archer et al., 2003). The expansion of the latter, as Britain's manufacturing sector eroded from the 1960s, made literacy increasingly necessary to both individuals and the economic productivity of the state. Increasingly, dyslexic difficulties were being encountered, and parents were seeking help.

To this end, a conference was held in 1962 at Barts Hospital, London. Organised by a paediatrician, Alfred White Franklin, the conference was small, but well-attended, with psychology the most common profession represented. Between them, attendees decided that dyslexia required more concerted research attention (White Franklin, 1962). The next year, the Word Blind Centre for Dyslexic Children (WBC) was formed in Bloomsbury. Parents with the resources enrolled their dyslexic children from across the country. Later, Local Educational Authorities began to fund places, too. Lasting until 1972, the WBC set the stage for a series of later organisations, including the British Dyslexia Association and Dyslexia Institute, whose work embedded dyslexia into British legislation and education. The era of 'modern dyslexia' had begun (addressed elsewhere, e.g., Kirby, 2019b, 2019c). But by this point, critiques of dyslexia, which would hinder the work of this new dyslexia

community, were already in-place. While this generation of campaigners overcame such critiques, the current iteration of the dyslexia debate shows that at least some lingered critiques dependent on dyslexia's particular social and educational histories.

Discussion: dyslexia debated, then and now

Dyslexia and its ambiguous definition

Today, perhaps the pre-eminent criticism of dyslexia is that its definition is ambiguous. In the academic sphere, this has led to Elliott and Grigorenko's assertion that 'there are very significant differences in the ways in which this label ["dyslexia"] is operationalised'; in the popular sphere, to Liddle's (somewhat less subtle) suggestion that 'dyslexia' is 'utterly meaningless' (see Introduction). As the dispute between Broadbent and Hinshelwood of 1895-1896 shows, however, debates over the precise delineation between wordblindness, dyslexia, and similar terms, are as old as the first British reference to these conditions. For those Victorian physicians, troubles with definition were exacerbated by the fact that, contrary to certain physical disabilities, the same underlying cognitive difficulty can present in a variety of ways, depending on the opportunities available to/ other abilities of the individual. Central here is that 'hidden disabilities', like dyslexia, are not always immediately apparent – rather, they become visible under certain conditions, manifesting differently in different people. Concomitantly, scientific understandings of them emerge over time, as theories are proposed and refuted, other theories are proposed and refuted, and so forth (Kuhn, 2012).

In this, the history of dyslexia mirrors the history of many other hidden disabilities, including depression, autism, and more recently, ADHD (Evans, 2017; Lawlor, 2012; Smith, 2012; Waltz, 2013) – which have garnered greater and lesser societal attention at differing times, often because of dedicated social movements and campaigns. In the case of depression, Lawlor (2012) shows that the condition has never had a universallyaccepted definition and/or aetiology and/or treatment. Today, medical texts continue to debate where definitional lines should be drawn, and how/if depression should be differentiated from other, similar conditions (Beck & Alford, 2009; Parker, 2006). Like dyslexia, depression is invisible, making it easier for dissenters to challenge; like dyslexia, it is sometimes criticised by those who claim that it is an excuse for common problems that affect others, such as sadness and general low mood. Again, this article cannot contribute to scientific debates around dyslexia. But what is notable here, from a historical perspective, is that debates over dyslexia's exact definition have been witnessed before - and that these stem partly from the particular, usually hidden characteristics of cognitive difficulties.

Dyslexia and worried parents

Similarly, other criticisms of dyslexia refer to social, rather than scientific aspects of dyslexia's history. In particular, three associations emerged during dyslexia's early history that still mark the dyslexia debate. The first considered here is that dyslexia is an invention of, or at least especially favoured by, overly-concerned parents. Thus, for Elliott and Grigorenko (2014b, p. 579): 'Some parents believe that [by being labelled "dyslexic"] their child will be treated more sympathetically by teachers, and expectations of their intellectual and academic potential will be higher'. For Liddle (2014), less delicately: 'dyslexia has been the crutch upon which middle-class parents support themselves when they discover that their children are actually dense ... contrary to their expectations.' The case studies of Pringle Morgan and Hinshelwood show that, absent state support for dyslexia in the late 19th-early 20th centuries, it was necessarily concerned parents, with the financial means to seek support, who initially garnered the services of specialist doctors. In other words, dyslexia came to the attention of the medical establishment via such parents. Later, as educational provision expanded, children with dyslexia were increasingly identified by teachers and other professionals (Kirby, 2019b), but the association of dyslexia with worried parenthood was already established.

Again, this feature of dyslexia's history adds texture to ongoing discussions of parents' alleged over-involvement in seeking dyslexia diagnoses. While it may be that some parents (now and in the past) have sought the dyslexia label principally to pathologise and so explain their children's difficulties, exonerating themselves from responsibility and opening up funding support, parental concern has also been a key feature of bringing dyslexic difficulties to the attention of medical and educational establishments. Indeed, it was the parents of the child patients of Hinshelwood and Pringle Morgan who were the first to bring dyslexic difficulties to public attention, via the published reports of these doctors. The line between over-anxious parents, and parents with genuine and realistic concerns, is not always easily determined. But the early history of dyslexia shows that the worries of certain parents were deemed serious enough to be considered by medical professionals in the first instance, educational psychologists in the second. In this way, parental concern has often been a feature of the individual identification of dyslexia in children, but not in isolation - rather, such concern has been acknowledged, then developed, by professionals involved in treating children's reading difficulties.

Dyslexia and the middle-classes

Moreover, it was necessarily parents from wealthier socio-economic backgrounds who were better able to bring dyslexia to the attention of such professionals. It was they who, absent state recognition and support, were able to pay the consultation fees of doctors like Broadbent, Hinshelwood and Pringle Morgan; it was they who were able to pay the term fees of private schools and specialist centres like Millfield and the Word Blind Centre, respectively. In the era of modern dyslexia, which followed the WBC and saw dyslexia institutionalised in British legislation, schooling and society, it was similarly middle-class parents who drove the foundation of organisations like the British Dyslexia Association and Dyslexia Institute (Kirby, 2019c). Prior to state recognition of dyslexia, concerned parents with personal resources were the only way in which children with dyslexia could receive support. In this way, dyslexia's middle-class alignment is less an example of unscientific bias – i.e. that middle-class parents have been able to pay amenable educational psychologists for diagnosis, despite there being no evidence base to support dyslexia – and more a feature of its social history.

Again, the same caveats apply as in the discussion above. For some parents of means, perhaps of children with mild dyslexic difficulties, the dyslexia diagnosis has conceivably been a label pursued for its own sake. This, despite the original association of dyslexia with middle-class groups stemming from an absence of support elsewhere, and so the need to mobilise middle-class social and financial capitals to acquire assistance. At the same time, the proposition that dyslexia's association with the middle-classes somehow undermines the term is limited. Given the absence of substantial state dyslexia support until the 1990s, it is difficult to see how early interest in the area could have been undertaken by persons other than those of independent financial means. Ongoing critiques of dyslexia as a label unfairly sought, perhaps even invented, by middle-class parents, ignores the fact that this group were necessarily amongst the first to recognise dyslexic difficulties. As with autism and ADHD, a correlation of these conditions with middle-class groups tells us more about the society in which they exist, than the validity of the conditions themselves.

Dyslexia and high intelligence

Related to these social associations, a further aspect of dyslexia's early history to have endured to the present day is the belief that dyslexia is a vehicle for parents to claim that their children, contrary to their reading performance, are otherwise intellectually able. For Liddle, dyslexia is a label sought by parents seeking to enshrine their children's otherwise 'normal' learning abilities; for Elliott, referring critically to the actions of a 'typical' dyslexic child's parents, '(Mum) ... had paid around £2,000 on commissioning reports showing how bright and intelligent Alex [a boy with dyslexia, whose case was widely publicised] was despite his condition' (UCL IOE Media Services, 2019). As the Rose definition implies (see Introduction), proponents of the term no longer claim a connection between dyslexia and intelligence ('Dyslexia occurs across the range of intellectual abilities'). But, when the condition was first identified, the 'discrepancy diagnostic model' (albeit not yet by that name) held sway. Other than their reading difficulties, Pringle Morgan's 'Percy' was 'a bright and intelligent boy', and Hinshelwood's unnamed patient was 'bright and in every respect an intelligent boy' (see above). The first cases of dyslexia were identified where children were otherwise intellectually able, it being believed that, if pupils struggled generally, there was no way to determine if their reading difficulties were isolated or because of general learning problems.

While the science developed beyond this, as we have seen, the discrepancy model's legacy endured. Until the 1970s, it was a key mode through which dyslexia was diagnosed in children. When the model was superseded by researchers who discovered that dyslexic difficulties existed across the intellectual spectrum, it remained in the popular consciousness – and is still invoked today, by representatives from both sides of the debate, for opposing purposes. For proponents of the term (often campaigners and advocates), it is a rebuke to those who suggest that dyslexia is a synonym for low intelligence, and a way to empower those with dyslexia. For detractors, it is used to question the motivations of parents who seek the dyslexia label for their children. The discrepancy diagnostic model was once the accepted scientific tool of diagnosis, but no longer – those who use it, use it incorrectly. In this way, supporters and critics of the term perpetuate discussion of the discrepancy diagnostic model, first outlined by the case studies of Hinshelwood and Pringle Morgan, for social, rather than scientific, purchase.

Dyslexia and over-diagnosis

Relatedly, the implicit power of a dyslexia 'lobby' lies behind the fifth and final theme of the current dyslexia debate to have been prefigured in dyslexia's early decades: over-diagnosis. In the 1940s, Cyril Burt decried the fact that 'nearly every educational psychologist has had cases referred to him in which this verdict [special disability in reading, i.e. dyslexia] has been pronounced' (Burt & Lewis, 1946, p. 117). Seventy years later, Tom Bennett, of the 2017 independent review of how to optimise school behaviour, describes dyslexia as an 'over-diagnosed crypto-pathology', 'barely understood' (Bennett, 2017). For Elliott and Grigorenko (2014a, p. 182), dyslexia is 'a *meme*, a unit of cultural transmission', whose ability to survive 'does not depend on whether it is true, useful, or even potentially harmful', but on whether it can be replicated and employed by the 'dyslexia industry'. In other words, the notion that dyslexia is a label frequently sought by vested interests – e.g., the parents of dyslexic children, the private educational psychologists they commission, and those who seek to promote remedial interventions for profit – has existed since the middle of the 20th century.

The timing of Burt's comments, in particular, is interesting. As the short history above implies, there was little systematic attention to dyslexia at the time he was writing. Indeed, Millfield, the first school to specifically assist a child with dyslexic difficulties, did so only in 1942. It was another 20 years before the Word Blind Centre for Dyslexic Children opened its doors: the first centre in the country dedicated to better understanding and ameliorating reading difficulties. In this way, it seems possible that Burt's insinuation that dyslexia was over-diagnosed in referrals stemmed from a personal antipathy to the term. In recent years, the notion that dyslexia is over-diagnosed has been resuscitated, with detractors declaring that dyslexia is a 'crypto-pathology' or 'meme', as above. Dyslexia's complex, multi-dimensional definition offers one explanation for why firm numbers of dyslexia's prevalence are difficult to ascertain – albeit proponents of the term seem more likely to state how they arrived at their estimates (e.g., Miles, 1992; Rutter, 1978; Sprenger-Charolles et al., 2011), than opponents are to quantify their beliefs that dyslexia is over-diagnosed. Arguments stating that dyslexia is over-diagnosed, therefore, seem as much a feature of social commentary around dyslexia, as of scientific debate.

Conclusion: heard it all before? The future of the 'dyslexia debate'

In this article, current iterations of the dyslexia debate have been historicised, showing how its key themes have marked dyslexia's history for over 140 years. Beyond this, it has sought to show that scientific debates around dyslexia have rarely, if ever, been divorced from the social contexts in which dyslexia has existed. Specifically, this article has focused on five aspects of the dyslexia debate, which contend that dyslexia: 1) has no clear definition, and cannot be differentiated from other reading difficulties; 2) is a product of over-anxious parents, seeking to explain and justify their children's learning difficulties; 3) is a 'middle-class' myth, more common in pupils from wealthier backgrounds for social rather than scientific reasons; 4) is over-diagnosed, especially by educational psychologists unfamiliar with the term and/or seeking to appease over-anxious parents; and 5) is frequently associated with high intelligence, despite there being no scientific basis for this claim. For each, the article has stressed that both dyslexia's social and scientific histories are crucial in understanding them.

In this way, the current dyslexia debate is less a unique moment in dyslexia's history, than a legacy of earlier discussions and disputes. Despite them, dyslexia has gone from a niche concern of Victorian medics, to a widely-known condition that attracts substantial state support. Over recent decades substantial progress has been made in understanding reading problems, and in helping the children who possess them, and the dyslexia debate should not obfuscate these achievements. Today - the statements of Warwickshire County Council notwithstanding - dyslexia is recognised by the Special Educational Needs and Disability Code of Conduct, as well as legislation such as the 2010 UK Equality Act. Other research, focusing on the 1960s onward, the period of 'modern dyslexia', has traced the ways in which this progress has helped thousands of pupils with reading difficulties to make successful transitions from education into the workplace and elsewhere (Kirby, 2019b). Hitherto, pupils exhibiting these difficulties were frequently derided as lost educational causes (an argument echoed by some of the media commentators in the Introduction). As such, it might be reiterated that recent critiques do not reflect a new, incontrovertible discovery of dyslexia's 'non-existence'. Rather, they stem, in part, from a collection of late 19th and early 20th century arguments, which dyslexia has never completely shaken off. Like other 'hidden disabilities', such as depression, sporadic criticism of dyslexia's biological reality or specific nomenclature may be a part of, rather than separate from, the dyslexia story.

This is especially true in the case of definition. As Victorian debates show, for non-visible cognitive impairments, such as dyslexia, an absence of definitive description has always fostered dissenters. In this way, understanding of dyslexia has developed in the standard scientific fashion – with the proposal of theories, their refutation, and so forth (Kuhn, 2012). Moreover, dyslexia's associations with overanxious parents, the middle-classes and high-performing children, have been used to cast further shade on the concept. If dyslexia is a scientific universal, why does it have such particular associations? A historical perspective on dyslexia helps to explain: such associations are part of dyslexia's particular social history, including early scientific beliefs in a discrepancy diagnostic model and the societal reception of these by concerned parents and advocates, and the lack of state support for dyslexia and so necessity of privately-funded remediation. Given this, the 'over-diagnosis' of dyslexia in wealthier populations was predictable. A logical response today might be to broaden, rather than diminish, dyslexia support in state education, where children are less likely to have access to the diagnoses of private educational psychologists.

One reading of this history, of course, is that arguments against dyslexia endure precisely because they have never been adequately resolved by current proponents of the term in the science of reading. From this viewpoint, their recurrence across time increases, rather than decreases, their validity. Part of the purpose of this article, though, has been to show that the blurring of the social and the scientific in critiques of dyslexia makes it difficult for those in the science of reading to respond to such critiques alone. And that many of these critiques are based on particular, rather than universal, aspects of dyslexia's history. For example, some parents have undoubtedly sought the dyslexia label for self-interested reasons, eager to acquire the support with which it is associated, regardless of dyslexia's scientific validity. But this is not the same as saying that all parents have been so motivated, nor that the cynicism of such a minority reflects an underlying scientific problem with the concept. The reason for detractors highlighting 'worried parents' in the dyslexia debate is

often associated more with a pre-existing antipathy to the term. Moreover, the history of dyslexia shows that the role of concerned parents in its history has not been a sinister plot to acquire undeserved funding, but a necessary reaction to the absence of state support for reading difficulties and so any other pathway to assistance.

Like debates around many scientific concepts – from climate change to depression – discussion of dyslexia incorporates the social, the cultural and the political, as well as the scientific. As such, better understanding its history helps to untangle dyslexia as a term - a task especially necessary when critiques, despite claiming scientific backing, are often predicated on social rather than scientific beliefs. While the allegiances of this article are with the term, this is not to foreclose the possibility that another concept (or concepts) emerging from the science of reading - whether psychology, neuroscience, or elsewhere - might replace 'dyslexia' in the future: there is no objective reason that it should not. Rather, it is to suggest that the 'dyslexia debate', as currently formulated and despite its alleged concern with dyslexia's science, draws substantially from aspects of dyslexia's social history. As such, the debate can be informed by a historical perspective. The dyslexia debate will continue in some quarters, that seems clear, but through further understanding of dyslexia's history, future discussion of the term might focus more on arguments that are novel, and less on those that have been heard before.

Disclosure statement

No potential conflict of interest was reported by the author.

Funding

This work was supported by the John Fell Fund [152/045]; Wellcome Trust [105605/Z/14/Z].

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